

Docker Containers

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GitHub Repository URL:

<https://github.com/Eshwar7208/assignment1-docker-containers>

Commands Used

builds the latest images and starts all required services
docker compose up --build

stops the containers and
completely removes them
along with their associated
volumes to ensure a clean
reset of the environment.

docker compose down -v

Console Output:

```
app-1 | {
app-1 | "total_trips": 6,
app-1 | "avg_fare_by_city": [
app-1 | {
app-1 | "city": "Charlotte",
app-1 | "avg_fare": 16.25
app-1 | },
app-1 | {
app-1 | "city": "New York",
app-1 | "avg_fare": 19.0
app-1 | },
app-1 | {
app-1 | "city": "San Francisco",
app-1 | "avg_fare": 20.25
app-1 | }
app-1 | ],
app-1 | "top_by_minutes": [
app-1 | {
app-1 | "city": "San Francisco",
app-1 | "minutes": 28,
app-1 | "fare": 29.3
app-1 | },
app-1 | {
app-1 | "city": "New York",
app-1 | "minutes": 26,
app-1 | "fare": 27.1
app-1 | },
```

```
app-1 | {
app-1 | "city": "Charlotte",
app-1 | "minutes": 21,
app-1 | "fare": 20.0
app-1 | },
app-1 | {
app-1 | "city": "Charlotte",
app-1 | "minutes": 12,
app-1 | "fare": 12.5
app-1 | },
app-1 | {
app-1 | "city": "San Francisco",
app-1 | "minutes": 11,
app-1 | "fare": 11.2
app-1 | },
app-1 | {
app-1 | "city": "New York",
app-1 | "minutes": 9,
app-1 | "fare": 10.9
app-1 | }
app-1 | ]
app-1 | }
app-1 exited with code 0
```

out/summary.json

```
"total_trips": 6,
  "avg_fare_by_city": [
    {
      "city": "Charlotte",
      "avg_fare": 16.25
    },
    {
      "city": "New York",
      "avg_fare": 19.0
    },
    {
      "city": "San Francisco",
      "avg_fare": 20.25
    }
  ],
  "top_by_minutes": [
    {
      "city": "San Francisco",
```

```
    "minutes": 28,  
    "fare": 29.3  
  },  
  {  
    "city": "New York",  
    "minutes": 26,  
    "fare": 27.1  
  },  
  {  
    "city": "Charlotte",  
    "minutes": 21,  
    "fare": 20.0  
  },  
  {  
    "city": "Charlotte",  
    "minutes": 12,  
    "fare": 12.5  
  },  
  {  
    "city": "San Francisco",  
    "minutes": 11,  
    "fare": 11.2  
  },  
  {  
    "city": "New York",  
    "minutes": 9,  
    "fare": 10.9  
  }  
]  
}
```

Reflection

Through this assignment, I learned how to use Docker Compose to set up and manage multiple containers, allowing a Python application to communicate with a PostgreSQL database. This experience helped me better understand how containers work together, how services depend on each other, and how to configure environments in a container-based system.